WHAT IS CLAIM IS:

1. A method for manufacturing a brightness enhancement film of a liquid crystal display (LCD) comprising steps of:

(a) providing a first substrate;

(b) forming a first macromolecule liquid crystal on said first substrate;

(c) curing a part of said first macromolecule liquid crystal on said first substrate for forming a first light transmitting layer;

(d) providing a second substrate;

(e) forming a second macromolecule liquid crystal on said second substrate;

(f) curing a part of said second macromolecule liquid crystal on said second substrate for forming a second light transmitting layer;

(g) combining a non-curing part of said first macromolecule liquid crystal and said second macromolecule liquid crystal for forming a third macromolecule liquid crystal between said first light transmitting layer and said second light transmitting layer; and

(h) curing said third macromolecule liquid crystal for forming a third light transmitting layer.

2. A method according to claim 1 wherein said first substrate and said second substrate are polyethylene terephalate substrates (PET).

3. A method according to claim 1 wherein said first substrate and said second substrate each further comprises an alignment film.

4. A method according to claim 1 wherein said first macromolecule liquid crystal and second macromolecule liquid crystal are cholesteric liquid crystal (CLC).

5. A method according to claim 4 wherein the cholesterol molecules of said

first light transmitting layer and said second light transmitting layer comprise a single pitch.

6. A method according to claim 4 wherein said first light transmitting layer and said second light transmitting layer have the same chiral character.

7. A method according to claim 1 wherein said step (b) is finished through coating.

8. A method according to claim 1 wherein said step (c) is finished through UV light which transmits said first substrate to cure a part of said first macromolecule liquid crystal.

9. A method according to claim 8 wherein said first substrate can absorb a part of said UV light.

10. A method according to claim 1 wherein said step (c) further comprises a step of:

(c1) providing a gas for said first macromolecule liquid crystal to control the curing thickness of said first macromolecule liquid crystal, wherein the quantity of said gas of said curing part of said first macromolecule liquid crystal is different from the quantity of said gas of a non-curing part of said first macromolecule liquid crystal.

11. A method according to claim 1 wherein said step (e) is finished through coating.

12. A method according to claim 1 wherein said step (f) is finished through UV light which transmits said second substrate to cure a part of said second macromolecule liquid crystal.

13. A method according to claim 12 wherein said second substrate can absorb a part of said UV light.

14. A method according to claim 1 wherein said step (f) further comprises a

step of:

(f1) providing a gas for said second macromolecule liquid crystal to control the curing thickness of said second macromolecule liquid crystal, wherein the quantity of said gas of said curing part of said second macromolecule liquid crystal is different from the quantity of said gas of a non-curing part of said second macromolecule liquid crystal.

15. A method according to claim 1 wherein said step (g) further comprises a step of:

(g1) diffusing said first macromolecule liquid crystal and said second macromolecule liquid crystal after combining to make said third macromolecule liquid crystal spread equally between said first light transmitting layer and second light transmitting layer.

16. A method according to claim 1 wherein said step (h) further comprises a step of: (h1) removing said second substrate.

17. A method for making brightness enhancement film, said method comprising steps of:

(a) providing a first substrate and a second substrate;

(b) forming a first and a second macromolecule liquid crystal on said first and said second substrate, respectively;

(c) curing a part of said first macromolecule liquid crystal on said first substrate and a part of said second macromolecule liquid crystal on said second substrate for forming a first light transmitting layer between said first substrate and said first macromolecule liquid crystal and forming a second transmitting layer between said second substrate and said second macromolecule liquid crystal, respectively;

(d) combining a non-curing part of said first macromolecule liquid crystal

and said second macromolecule liquid crystal for forming a third macromolecule liquid crystal between said first light transmitting layer and said second light transmitting layer; and

(e) curing said third macromolecule liquid crystal for forming a third light transmitting layer.

18. A method according to claim 17 wherein step (c) further comprises a step of:

(c1) providing a gas for said macromolecule liquid crystal to control the curing thickness of said first and said second macromolecule liquid crystal, wherein the quantity of said gas of said curing part of said first and said second macromolecule liquid crystal is different from the quantity of said gas of a non-curing part of said first and said second macromolecule liquid crystal.

19. A method according to claim 17 wherein step (c) cures a part of said first and said second macromolecule liquid crystal under different temperature control, respectively.

20. A method according to claim 17 wherein step (d) further comprises a step of:

(d1) diffusing said first macromolecule liquid crystal and said second macromolecule liquid crystal after combining to make said third macromolecule liquid crystal spread equally between said first light transmitting layer and second light transmitting layer.

21. A method according to claim 17 wherein step (e) further comprises a step of:

(e1) removing said second substrate.

22. A method according to claim 17 wherein said second substrate is a 1/4 - wavelength plate.

23. A brightness enhancement film put in use on a display, said brightness enhancement film comprising:

a first substrate;

a first light transmitting layer mounted on said first substrate;

a second light transmitting layer mounted on said first light transmitting layer;

a third light transmitting layer mounted between said first light transmitting layer and second light transmitting layer; and

a second substrate mounted on said second light transmitting layer, wherein said first and said second light transmitting layer have a first and a second chiral character, respectively, and said third light transmitting layer has a wide-band chiral character.

24. A brightness enhancement film according to claim 23 wherein said display is a LCD.

25. A brightness enhancement film according to claim 23 wherein said first substrate is a polyethylene terephalate substrate (PET).

26. A brightness enhancement film according to claim 23 further comprises a first alignment film mounted between said first substrate and said first light transmitting layer.

27. A brightness enhancement film according to claim 23 wherein said first substrate is a 1/4 -wavelength plate.

28. A brightness enhancement film according to claim 23 wherein said first, said second and said third light transmitting layer are all made of cholesteric liquid crystal (CLC).

29. A structure of a display, said structure comprising:

a luminary for providing a backlight;

a light guide plate mounted on a side of said luminary for guiding the scattering direction of said backlight;

a brightness enhancement diffusion sheet mounted on said light guide plate for increasing luminance; and

a liquid crystal layer mounted on said brightness enhancement diffusion sheet;

wherein said brightness enhancement diffusion sheet further comprises:

a first substrate;

a first light transmitting layer mounted on said first substrate;

a second light transmitting layer mounted on said first light transmitting layer;

a third light transmitting layer mounted between said first light transmitting layer and second light transmitting layer;

a 1/4-wavelength plate mounted on said second light transmitting layer; and

a polarizer mounted on said 1/4-wavelength plate wherein said first and said second light transmitting layer have a first and a second chiral character, respectively, and said third light transmitting layer has a wide-band chiral character.

30. A structure according to claim 29 further comprises a reflect sheet mounted below said light guide plate for increasing the efficiency of light.